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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Marc van Oldenborgh

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EXAMINER

NGUYEN, TOAN D

ART UNIT

PAPER NUMBER

2616

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/730,837	Applicant(s) OLDENBORGH ET AL.	
	Examiner TOAN D. NGUYEN	Art Unit 2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 32-50 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 32-50 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/08/03;09/20/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir.1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 32-50 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-31 of U.S. Patent No. 6,687,263. Although the conflicting claims are not identical, they are not patentably distinct from each other because the application's claims 32-50 merely narrow the scope of the patented claims by claiming some claim elements (i.e., a packet of digital data elements arranged 1...n, sending stops when the entire packet is sent once, a first transmitter for sending a first stream, a second transmitter for sending a second stream of digital data elements, first receiver for first stream of digital data elements, and a second receiver for a second stream of digital data elements). The application's claims are nearly identical in every other respect to the patented claims. Therefore, the application's claims are simply narrow versions of the patented claims. It is Examiner's position that narrowing the patented claims by claiming some claim elements (i.e., a packet of digital data elements arranged 1...n, sending stops when the entire packet is sent once, a first transmitter for sending a first stream, a second transmitter for sending a second stream of digital data elements, first receiver for first stream of digital data elements, and a second receiver for a second stream of digital data elements) of the patented claims would have been obvious to one of ordinary skill in the art in view of the patented claims. It is important to note that the instant application is a combination of the application, which yielded the patent (USP 6,687,263) used herein as the basis for

the obvious-type double-patenting rejection. The applicant is attempting to narrow the parent application's claims by adding some of the claim elements in the continuation at issue here. If allowed, the application at bar would unjustly extend Applicant patent protection beyond the statutory period, at the same time, granting broader protection to the applicant.

Claim Rejections - 35 USC § 112

3. Claims 39-40 and 45-46 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claims 39-40, 45 and 46 claimed software for sending and for receiving a packet of digital data elements. However, the specification supports only hardware, for instance in a PROM, EPROM or the like (see specification on page 5, line 8) with only a brief mention that such hardware without any adequate and enabling disclosure.

4. Claims 38 and 42 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 38, line 3, it is unclear as to what is meant by "the first and second device send a signal to the first device". Therefore, the scope of the claim is unascertainable.

Claim 42 recites the limitation "the source or sources" in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 103

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5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 32-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dolman et al. (US 5,867,500) further in view of Shalom (US 6,876,669).

For claim 32, Dolman et al. disclose communications in a distribution network for multiplexing digital data (figure 1, reference 16), wherein a packet of digital data elements arranged 1..n is sent in at least a first stream of data elements starting with sending data element 1 and further upward in sequential order (figure 2,col. 3, line 67 to col. 4, line 2), and a second stream of data elements starting with sending data element n and going downward in sequential order (col. 4, lines 5-8).

However, Dolman et al. do not expressly disclose sending stops when the entire packet is sent once. In an analogous art, Shalom discloses sending stops when the entire packet is sent once (col. 3, lines 9-10).

One skilled in the art would have recognized the sending stops when the entire packet is sent once, and would have applied Shalom's sending fragments of a given packet in Dolman et al.'s MUX 16. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Shalom's packet fragmentation with nested interruptions in Dolman et al.'s communications in a distribution network with the motivation being stopped until the entire packet has been sent (col. 3, lines 9-10).

For claim 33, Dolman et al. disclose wherein the first stream and second stream are simultaneously sent col. 3, lines 55-57).

For claim 34, Dolman et al. disclose wherein a first device sends the first stream of data elements to a third device, and a second device sends the second stream of data elements to the third device (figure 1, references 16 and 18, col. 3, lines 53-55).

For claim 35, Dolman et al. disclose wherein the third device places the data elements in a data buffer the size of the packet, and sends a signal to the first and second device when either the buffer is full, or stops sending confirmations until the buffer is full (col. 4, lines 30-37).

For claim 36, Dolman et al. disclose wherein a first device sends the first stream to a second device, and the second stream to a third device (figure 1, references 16 and 18, col. 3, lines 53-55).

For claim 37, Dolman et al. disclose wherein the second device and third device immediately at receipt forward the data they received from the first device to each other (col. 3, lines 53-57).

For claim 38, Dolman et al. disclose wherein the second and third device have been provided with a data buffer the size of the packet, wherein the received data are placed in the data buffer and the first and second device send a signal to the first device when the respective data buffer is full (col. 4, lines 30-33).

8. Claims 41-44 and 47-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dolman et al. (US 5,867,500) further in view of Ben-Michael et al. (US 6,078,565).

For claims 41-42, Dolman et al. disclose communications in a distribution network for receiving a packet of data elements 1..n which are sent in at least a first stream of data elements starting with sending data element 1 and further upward in sequential order (figure 2,col. 3, line 67 to col. 4, line 2), and a second stream of data elements starting with sending data element n and going downward in sequential order (col. 4, lines 5-8), wherein a device provided with a data storage defines a data buffer in the data storage for n data elements, and receives the first stream of data elements and the second stream of data elements (col. 4, lines 31-33).

However, Dolman et al. do not expressly disclose wherein the device subsequently fills the data buffer starting at the front of the data buffer and sequentially upward with the first stream of data elements and fills the data buffer starting with rear of the data buffer and sequentially downward with the second stream of data elements.

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In an analogous art, Ben-Michael et al. disclose wherein the device subsequently fills the data buffer starting at the front of the data buffer and sequentially upward with the first stream of data elements and fills the data buffer starting with rear of the data buffer and sequentially downward with the second stream of data elements (Abstract, lines 5-7).

One skilled in the art would have recognized the wherein the device subsequently fills the data buffer starting at the front of the data buffer and sequentially upward with the first stream of data elements and fills the data buffer starting with rear of the data buffer and sequentially downward with the second stream of data elements, and would have applied Ben-Michael et al.'s FIFO in Dolman et al.'s FIFO. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Ben-Michael et al.'s method and apparatus to expand an on chip FIFO into local memory in Dolman et al.'s communications in a distribution network with the motivation being to provide the front and back ends of the FIFO which are involved in receiving and transmitting data (Abstract,, lines 6-7).

For claims 43-44, Dolman et al. disclose communications in a distribution network for sending a packet of digital data elements 1..n, and sends the digital data elements in a first stream starting with data element 1 and further upward in sequential order (figure 2, col. 3, line 67 to col. 4, line 2) and a second stream starting with data element n and going downward in sequential order (col. 4, lines 5-8).

However, Dolman et al. do not expressly disclose wherein a device provided with a data storage creates a data buffer in the data storage for n digital data elements,

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stores the digital data elements in sequential order in the data buffer. In an analogous art, Ben-Michael et al. disclose wherein a device provided with a data storage creates a data buffer in the data storage for n digital data elements, stores the digital data elements in sequential order in the data buffer (Abstract, lines 5-7).

One skilled in the art would have recognized the wherein a device provided with a data storage creates a data buffer in the data storage for n digital data elements, stores the digital data elements in sequential order in the data buffer and would have applied Ben-Michael et al.'s FIFO in Dolman et al.'s FIFO. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Ben-Michael et al.'s method and apparatus to expand an on chip FIFO into local memory in Dolman et al.'s communications in a distribution network with the motivation being to provide the front and back ends of the FIFO which are involved in receiving and transmitting data (Abstract, lines 6-7).

For claims 47, Dolman et al. disclose communications in a distribution network for sending a packet of digital data elements 1..n, a first transmitter for sending a first stream of digital data elements, starting with data element 1 and further upward in sequential order (figure 2, col. 3, line 67 to col. 4, line 2), and a second transmitter for sending a second stream of digital data elements, starting with data element n and going downward in sequential order (col. 4, lines 5-8).

However, Dolman et al. do not expressly disclose a memory for storing the packet of digital data. In an analogous art, Ben-Michael et al. disclose a memory for storing the packet of digital data (Abstract, lines 5-7).

One skilled in the art would have recognized the memory for storing the packet of digital data, and would have applied Ben-Michael et al.'s FIFO in Dolman et al.'s FIFO. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Ben-Michael et al.'s method and apparatus to expand an on chip FIFO into local memory in Dolman et al.'s communications in a distribution network with the motivation being to provide the front and back ends of the FIFO which are involved in receiving and transmitting data (Abstract, lines 6-7).

For claims 48-50, Dolman et al. disclose communications in a distribution network for receiving a packet of digital data elements, a first receiver for a first stream of digital data elements, starting from the front and further upward in sequential order (figure 2, col. 3, line 67 to col. 4, line 2), and a second receiver for a second stream of digital data elements, and storing it in said memory, starting from the back of the memory and going downward in sequential order (col. 4, lines 5-8).

However, Dolman et al. do not expressly disclose a memory for storing the packet of digital data. In an analogous art, Ben-Michael et al. disclose a memory for storing the packet of digital data (Abstract, lines 5-7).

One skilled in the art would have recognized the memory for storing the packet of digital data, and would have applied Ben-Michael et al.'s FIFO in Dolman et al.'s FIFO. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention, to use Ben-Michael et al.'s method and apparatus to expand an on chip FIFO into local memory in Dolman et al.'s communications in a distribution network with the

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motivation being to provide the front and back ends of the FIFO which are involved in receiving and transmitting data (Abstract, lines 6-7).

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to TOAN D. NGUYEN whose telephone number is (571)272-3153. The examiner can normally be reached on M-F (7:00AM-4:30PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Firmin Backer can be reached on 571-272-6703. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/T. D. N./
Examiner, Art Unit 2616

/FIRMIN BACKER/
Supervisory Patent Examiner, Art Unit 2616